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"Salvation of India lies in Cottages."

—*MAHATMA GANDHI*

SEARCH FOR CURE

The note of diffidence in the matter of finding cure for the malaise set in the country which characterised the statement of Shri Nehru to the Congress Parliamentary Party has thrown timely warning to every citizen of India to be on his guard and to stop looking up to the present leadership to find the solution of national problems. We have stated the same unpalatable truth over and over again in these columns that the present leadership has outlived its utility to the nation after independence and must be replaced by another set of constructive and creative-minded leadership. The statement of the Prime Minister, quoted by us extensively in the last issue of this journal betrays, lack of confidence to find the cure of the malady. The relevant portion of Shri Nehru's statement reads :—

"It was difficult to describe—it was just the atmosphere getting murkier, heavier and more difficult for a sensitive person to breathe easily. All these are things that are imponderables. You cannot catch hold of this or that but they are things that grow and make one feel that something should be done."

What is one to do? Frankly, I do not know. It is all very well for people to say, we should strike out with shining sword and cut down this head and that head, but it is not as easy as that. Our great leader Gandhiji remember, was actually assassinated. I mean to say there are all kinds of forces in a country, good forecs bad forces, forces of light, forces of darkness, everything mixed up. All of us, in the face of our great problems are small folk. Who are we to imagine that we can control destiny or change the face of things by some magic wand?"

That shows defeatist attitude on the part of our Prime Minister. A leader to be worth his salt should have capacity and confidence in himself to work up the solution of problems facing him with almost mathematical certainty. Then alone he can inspire confidence among his people for positive action. The statement of the Prime Minister is an open admission of not knowing what to do to solve the many complicated national problems. That itself is a pointer suggesting change of leadership in the country.

ALTERNATIVE LEADERSHIP

It is an open secret that the Congress, which is the ruling party in the country, is in a process of disintegration and ultimate extinction. Its leadership is practically exhausted and has been found ill-equipped to run efficient administration and to bring about economic development of the country. Otherwise too, conditions created in the country in moral, administrative and economic spheres are so hope-

less that the Prime Minister himself felt compelled to seek temporary retirement from office to find some cure that he could not act up to his reason and to the call of his conscience only shows that he has virtually abdicated his responsibility in favour of somebody else who should do the job hereafter.

The situation in the country bordering on anarchic conditions wants immediate change of leadership in the administration of the country. The failure of the Congress rule and the universal dissatisfaction against it is well demonstrated in the defeat of numerous Congress candidates in Provincial and Central elections. The volume of popular dissatisfaction against Congress rule in recent years has grown to such a pitch that the success of a Congress candidate in an election in many parts of the country is rather an exception than a rule.

• While, therefore, the end of the Congress rule is more or less certain, the emergence of some other political group or party to replace the Congress is not within sight. Judged from the test of sound and well-tried political ideology, service to the country and moral eminence of the leadership, no other party in the country has even the distant chance of replacing the Congress in the near future.

RISE OF BENEVOLENT DICTATORSHIP

That virtually means the end of democratic form of government and rise of benevolent dictatorship, in most parts, if not all over the country, which obviously is in line with centuries old political genious and tradition of this country. Democracy having failed to give honest and efficient administration the only alternative choice for the country rests with the revival of the old political institution of "Benevolent Dictatorship", which appears to be more agreeable and acceptable to the people of this country than any other form of government imported from the West. However distasteful the idea of "Benevolent Dictatorship" may appear to our westernised democratic leadership, we have no doubt, the political genius of the race will ultimately assert itself to the fulfilment of the destiny of the Nation.

Forms of governments are just means to the attainment of progress and happiness of human society. Democratic form of government having failed to satisfy the needs of good and efficient administration in this country during the last 11 years, the change of means or systems of government is inevitable. Obviously, a "Benevolent Dictator" is any day preferable to a selfish and power hungry democrat, who has corrupted and ruined the political future of this country.

Community Development—An Unmanned Programme

By: S. KRISHNA

The poverty-ridden, downtrodden and long neglected Indian peasants had pinned their hopes for a better life in the Community Development Programme, launched by the Government of India about seven years ago. It was in the fitness of

gruelling circumstances that the idea of rural community development was conceived.

The anxious eyes of the peasants groping in the dark in the absence of a torch-light to guide the correct path now look dizzy. The peasants are now yawning and throwing hands in dismay. A peasant says: "This programme has proved a curse to majority of the rural population, in as-much-as it has further widened the class distinction by bestowing the richer benifits on the already rich and further impoverishing the poor."

This statement is amply substantiated by the Programme Evaluation Organisation of the Planning Commission in its fifth evaluation report on the working of Community Development and National Extension Service Blocks. The report presents the finding of a Survey conducted in 82 Blocks — 36 Community Development Blocks and 46 National Service Blocks located in different States. In each State about 1/15th of the total number of Blocks was selected with due care to ensure that adequate representation was made for all the different areas within a State.

Shortage of Personnel

The survey points out two very important problems, namely shortage of personnel and paucity of facilities which could make agriculture a more profitable proposition. About 40 p.c. of the Blocks surveyed by the Evaluation Organisation reported absence of Block Development Officers for months together. About 60 p.c. of the Blocks had no agricultural specialists available with them for quite a long time. It is, therefore suggested by the Organisation that the number of Blocks should be increased only when the required personnel is available.

It has rightly urged that both personnel and finance for a Block should be well balanced. This suggestion stems from the Organisation's finding that some large Blocks do not have larger personnel and finance to meet the requirements. This has led to a certain 'dilution' of the programme in these Blocks. Because of undue delays in receiving sanction for funds and procedural defects, there has been short-fall in budgeted expenditure. Thus per capita annual expenditure at Rs. 1.4 in the case of N.E.S. Block and Rs. 2.00 in the case of Community Development Block is only 70 per cent and 55 per cent of the amounts envisaged in the Block pattern.

The Organisation has suggested that the procedure evolved in making funds available to the Blocks should not be cumbersome.

Apart from considerations such as financial facilities and availability of trained personnel the significance of the programme has been considerably missed.

It is not enough to awaken rural masses from a state of somnolence, what is important is to make them realise that the major part in this upliftment programme is to be played by the villagers themselves. This can be done if the rural masses are made to realise their responsibilities and obligations. At present people's participation in the Community Development Programme works out to an average of Re. 1 per person per year in the N.E.S. Blocks and Rs. 1.50 in Community Development Blocks.

According to the report, people's participation towards the close of a block period declines. It is a matter to be considered seriously. This is contrary to our expectations. The report attributes this tendency to the fact that the educational

effort and the "Radiational" influences have not been very effective. This can well of course be attributed to the rise in the prices of the commodities which rural people consume and also partly to the fact that the programme has not been able to give results according to people's expectations. It is worth while here to refer to the Balwantrai Mehta Committees report. Agriculture being the the mainstay of the rural people let us see how they have exerted themselves for effecting an improvement in agriculture. The agriculturists are eager to get good manures and good seeds from Government stores. Such seeds and manures are readily available but when the question of producing green manures or village compost or even of having seed multiplication farms arises we find lethargy prevailing. "Compost pits once dug have been subsequently abandoned". Various minor irrigation schemes constructed out of Government funds or loans have been put out of commission "or have not been properly maintained."

The Study Team report agrees with a previous report of the Programme Evaluation Organisation that beyond helping in the observance of some of the special occasions like festivals and national days the projects staff hardly seems to have much to do with the Community Centres. So seems to be the case with Gram Sevak. He does not regularly visit the centre. This indicates a serious neglect, and irresponsible attitude on the part of those engaged to carry out the Community Development Programme. This naturally brings to the fore the question of selection and training of right type of personnel. Unless we put the right people in charge of such programme there can hardly be any possibility of achieving what we desire.

A Big Conflict

The report has also tried to focus attention on a conflict between need and achievement in the Community Development Programme. It is stated that the programme is being mostly carried out only in areas where rainfall is in plenty. In other words such areas are doubly benifited because they receive help from nature and also from community development programme. Reverse is the case with areas where there is no rainfall. As already stated in the beginning of this article the eventual effect of the Programme is to make areas already rich, richer and poor, poorer. Such a policy is bound to further impoverish the less favoured areas by a gradual loss in production. Of course it cannot be denied that accent should not first remain on areas which promise quicker results. The report rightly points out: "The favoured areas which are also better suited to adopt techniques of agricultural improvement can make much greater contribution to increase of agricultural production in the short run."

Another important conclusion reached by the Programme Evaluation Organisation is that there has been lack of concentrated all-side attack on agricultural problems. The number of families which use improved seeds, fertilisers and better techniques is only one third of the families in villages covered by the Community Development Programme.

LAND REVENUE IN KIND

By: NAUTAMLAL C. TEJPAL

Since the Gold Standard, to support our currency is no more and there is fear of further inflation due to deficit financing, there must be fundamentals changes in Land tax system; otherwise the States will not be able to contribute anything to make the success of the Plan.

Land Tax in Cash Vs. in Kind: If the prices of the farm products are stabilised, there would be no evil effect of inflation, since 90 per cent of the basic necessities —food, fibre and sugar are supplied by land.

The system of assessment and collection of land taxes is the chief factor for land development and the price control of the foodgrains, sugar and cotton. By cash system of land tax, the farmer has become so much money-minded, that he thinks and dreams of money, grows more commercial crops, and invests his spare money in the smuggled gold. He is so orthodox, that he is afraid of investing in industrial shares, and though creating capital, keeps it dormant and so useless for the development of the country. No farmer would think of investing in saving certificates or banks.

The Rational Way

So the most rational way of collecting the land revenue is a tax in kind according to the yield of the crop. Out of the total yield, the State takes one third of the crop as taxes, while the two-thirds is retained by the farmer. One-third which the State, receives acts as a powerful factor to control the prices and supply of basic necessities. Out of the two-thirds which the farmer retains, he keeps for himself half of it for seeds and food, the other part he may market to buy his sundry necessities for marriages or other social functions. The quantity which the State receives is considerable to control the market.

In Russia and China as much as 40 per cent of the crop is taken by the State, from which 15 per cent is accounted for crop and cattle insurance, while free service is given to control the crop and cattle pests and diseases, also provident fund for the farmers is contributed out of this.

Taxes in kind were in vogue during pre-British regime in our country. The Native States, even during the British were collecting revenue in kind. But it was not so popular among the farmers due to too much harassment by the petty officials. But the system of land tax minus the old harassment will be an ideal one.

The system of land tax collection in kind could be simplified and standardised in which the main unit of the machine should be the AGRICULTURAL LAND BANK with branches in every group of 25 villages. The Land Bank should be given the charter to collect land tax in kind for which the State should pay a fixed commission for collecting, transporting, selling and storing the produce.

The Branch Manager of the Bank, with the co-operation of the village headman or Panchayat estimates the condition of the standing crops of each and every farm, and fixes the share of the crop at the rate of one-third of the estimated total product, and the farmer delivers the product to the Bank, and if the farmer has any objection to the estimation fixed, he has to bring the whole produce in the

yard of the Bank and then divide the same as per actual yield. Within a few years the yield of each farm could be standardised according to the rain and the quality of land.

The State Department through its experts makes the general estimate of the crop each year—district-wise and then asks the Head-office of the Bank to collect accordingly. The Bank with the help of its own experts estimates and advises the State to arrive at the correct figure, and simply acts as an agent between the State and the farmer strictly on business basis against fixed commission. The Bank entrusts to its branches the collection of tax in kind, distributing the estimate for each group of villages. The Bank collects, stores in its own granaries, charging the rent, transports, distributes or sells by tender or public auction as per instructions of the State. With this, the system of crop insurance is introduced so the State gets the guaranteed amount of revenue, if the crop is insured.

Farmer-Government Relations. At present the relation between the farmer and collector is, as that of the ruler and the ruled, but the relation with the Bank would be like a business firm and a client, which demands courtesy and honour from both the sides.

This is not entirely, a novel system of tax collecting. I have seen in Sudan, this system working for income tax collection. The yearly budget gives the figure of the estimated revenue from the income-tax and the same is submitted to the Central Chamber of Commerce, which in turn asks every Town Chamber to assess the income tax of each merchant, in consultation with the local advisory Board elected from among the merchants. Thus each merchant pays the tax as estimated, or he has the alternative to submit his account books if the estimate is higher. This is the simplest and easiest method of tax collecting.

Since the State becomes the veritable partner of the farmer, it supplies fertilisers, irrigation water and renders other services free of charge, as the higher production will mean higher income to the partner—the State. While the Bank helps the farmer to purchase land from the landlord, making financial arrangements. At present many farmers are refusing to utilise the irrigation facilities due to high water charges, but since his partner—the State—supplies the water free there would be no question of water charges.

As we have Collectors, Mamlatdars and Talaties at present to collect taxes, they should be replaced by a cadre of agriculture experts to advice and organise agriculture from top to bottom, even running a model farm in a group of ten villages. This staff would prepare up-to-date statistics of the villages, and can find out natural resources of the district and if there is any possible site for conserving water, the Bank with the help of the villagers can arrange for the necessary finance for the scheme. The higher yield will pay for the cost of maintaining such staff, and carrying out the small schemes.

Though India is mainly an agricultural country, we are taught in the schools all subjects except the A.B.C. of agriculture, so no educated young man knows anything about agriculture, though he knows about various sciences, mathematics, geography, history of distant countries etc. So the agriculture suffers and the people too suffer from semi-starvation. And a son of a farmer after taking the modern education, ceases to be

a farmer and joins the army of white-collared job searchers.

The Alternative

Due to inflation, the purchase value of the rupee is going down, and the fixed land revenue in cash will impoverish the State, and the people would get the food-grains at inflated rates. The State will get a huge amount of produce by the above method, which it can retain during the season of low prices and by starting the State trading can export directly to control the local market rates which would be in the interest of the farmers, the consumers and the State. If the food prices are reasonably low the labour cost too will be low, thereby reducing the cost of the manufactured articles for export to capture world market of certain commodities like cloth, jute products, tea etc.

Further the individuality of the farmer will not be disturbed as in collective or co-operative farming, so the farmer will work with more zeal than in a co-operative venture. However, if necessary, co-operative system too could be introduced to a certain extent, once the necessary staff to direct the whole activities of the farmer is available.

Bhoodan - A Bloodless Revolution

By: A. N. SHARMA

Meaning and Nature:—"Bhoodan" though new in practical life is not new in Hindi code-words. It is formed of two words Bhoomi (land) and Dan (donation). In other words Bhoodan is the contribution of land of 'haves' to 'have nots'. We all know that India is faced with the important problem of food production in the economic sphere. The Grow More Food Campaign, First and Second Five-Year Plan and many plans yet to come are all to combat this evil. The following table gives the import of foodgrains in the last eleven years (the imports in other words mean—shortage).

Table I.

S. No.	Years	Foodgrains Imported ('000tons)
1.	1947	2,654
2.	1948	2,841
3.	1949	3,706
4.	1950	2,125
5.	1951	4,725
6.	1952	3,864
7.	1953	2,003
8.	1954	808
9.	1955	700
10.	1956	1,420
11.	1957	3,716 *

It means that we are not producing sufficient to meet the demand, which is mainly due to inefficient methods used in agriculture. Concentration of agricultural land is in few hands, and consequently the existence of a large army of agricultural population without any land is one of the important problems to be tackled.

For this Zamindari Abolition Act with some provision for fixing ceiling on holdings has been passed by various States of India. The Bhoodan Yajna of Acharya Vinoba is an attempt in the direction of redistribution of land through

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† Foodgrains Inquiry Report Nov. 1957 Appendix IV p. 184.

* Provisional.

love rather than force and coercion which is always present in Government actions. Vinoba has estimated the number of landless persons as five crores and on the basis of one acre per head he has demanded five crore acres of land.

The Government can acquire land in no time but not without compensation. Assuming on the very modest rates of Rs. 20 per acre, 5 crore acres will require rupees one hundred crores for acquisition of land. In addition to this it will also involve huge expenditure in the collection and distribution of land. Our Government cannot spare this enormous amount of money at present. The other way is persuasion i.e. Bhoodan, for which we have to find a band of selfless workers who can devote their time and energies for this noble cause.

There are two important phases of the movement:—

1. **Collection of land:**—The land collected upto 1956 was 41,84,234 acres (data after 1956 is not available). The details are as given below :—

Table II

S. No.	States	Collected land (acres)	Cultivated area (i000 acre)	P.C.
1.	Andhra	237278	11916	19.9
2.	Assam	1551	10092	0.01
3.	Bihar	2154878	5515	39.1
4.	Bombay	237269	2368	10.01
5.	Delhi	396	79	0.5
6.	Himachal P.	1621	160	1.0
7.	Kerala	29056	1042	2.8
8.	M. Pradesh	168863	11441	1.5
9.	Madras	72047	5488	1.3
10.	Mysore	24232	4395	0.5
11.	Orissa	343198	5329	6.4
12.	Punjab	16856	7736	0.2
13.	Rajasthan	409676	18392	2.2
14.	U.P.	465103	11116	4.1
15.	W. Bengal	12210	3769	0.3
	Total	4184234	98838	4.2

The land collected upto 1956 is only 8.53 p.c. of the target fixed till March 1957. The highest percentage 39.10 is in Bihar and lowest 0.01 is in Assam. This progress is mainly because of the lack of sincere workers and the very nature of the work (collection).

2. **Distribution:**—It is the most difficult phase of the Movement. The main reason for this is, the lack of a well defined scheme of distribution. Though there is well defined process of distribution, its implementation is not as effective as the collection side and that is why 13.3 p.c. of the collected land has been distributed so far.

The following table gives the land collected and distributed in the various States of India by the end of 1956.

Table III

S. No.	States	Land Collected (acres)	Land distributed (acres)	P.C.
1.	Andhra	237278	44362	18.6
2.	Assam	1551	66	4.2
3.	Bihar	2154878	161138	7.4
4.	Bombay	237269	72114	3.2
5.	Delhi	396	157	39.2
6.	Himachal P.	1621	—	—
7.	Kerala	29056	2261	7.7
8.	M. Pradesh	168863	29588	17.5
9.	Madras	72047	—	—
10.	Mysore	24232	1901	8.2
11.	Orissa	343198	94278	21.6
12.	Punjab	16856	1378	8.1
13.	Rajasthan	409676	31851	7.7
14.	U.P.	465103	125655	27.2
15.	W. Bengal	12210	2823	23.1
Total		4184234	567572	13.1

The above table shows that the highest percentage of land distribution is in Delhi 39.7, lowest in Madras and Himachal Pradesh while the average is 13.3 p.c. If we want to increase the pace of distribution we should take help from the State Governments because it is difficult to do it with single hand and also with scarcity of money. But Acharya Vinoba is not of the same view, as he says that "Government interference will change the basic nature of the Movement." This argument has been supported by Dr. V. K. R. V. Rao, Advisor to the Planning Commission in development chiefs' conference at Mussoriee on 29th April 1957. He said that "official participation would weaken this Movement". Mr. V. T. Krishnamachari, Chairman of the same conference regarding the Government help has said "it was not the intention that Government officers should do the propaganda asking the people to donate the land. But by administrative action, by facilitating cultivation of land that had been given and in other ways officials could give encouragement to the movement. In other words a sympathetic approach could be established in the field of administrative action."

SOME DOUBTS:

An attempt has been made in the following few paragraphs to examine their criticism.

1. It creates uneconomic holding:

The terms economic holding though very commonly used, still lacks a clear conception. Some have linked the term with standard of living, while others with

a Record and Statistics Vol. VIII No. 1. p. 13.

b Bhoodan Ka lekha p. 44-45. publication All India Serva Seva Sangh, Kashi.

family income and still others with employment etc.

Therefore to speak in the term of economic holding is vague. Another term more precise "family managed holding" can be used which means 'unit area necessary for production with advantage and convenient to be managed by an individual agriculturist family'. For a hard worker a small holding will be economical but even for him it may be of no use in desert and in mountainous region. Therefore, a search for a fixed formula of economic size of holding is of little use. Because doing so one will neglect the actual conditions prevailing such as life customs, traditions and the socio-economic aspect of our agriculture.

In most of the States the average cultivated area is less than five acres. For Punjab, Dr. Calvert said that 63.7% of the owner area is less than five acres. Therefore, 5 acres of land available under the Bhoodan Movement for a family of five should be sufficient under the existing conditions. Individually one acre per head may seem to be small but on comparing this one acre with the land per head in various States the situation does not appear to be so unhappy. The following table shows the land per head in each State:—

Table IV

I. No.	States	Cultivable area c(,000 acres) S. No.	Agricultural Population (,000)d	Land per head in acres.
1.	Andhra P.	11916	21050	0.56
2.	Assam	10092	6633	1.50
3.	Bihar	5515	32920	0.62
4.	Bombay	2368	29867	0.08
5.	Delhi	79	172	0.45
6.	Himachal P.	160	1028	0.15
7.	Kerala	1042	7266	0.14
8.	M. Pradesh	11441	20350	0.29
9.	Madras	5488	18814	0.29
10.	Mysore	4395	13820	0.37
11.	Orissa	5329	11612	0.45
12.	Punjab	7736	10604	0.73
13.	Rajasthan	18392	11108	1.65
14.	Uttar Pradesh	11116	46897	0.23
15.	W. Bengal	3769	15886	0.23
	TOTAL	98838	248017	0.39

The above table reveals that on an average the land per head in India is 0.39 acres while in most of the agriculturally advanced States like U.P., Bihar, West Bengal, Madras, Mysore, it is even below 0.39 acres. Rajasthan & Assam are the only States which exceed more than one acre. Punjab lies in between the two.

c Record and Statistics Vol. VIII No. 1, P. 13.
d Agricultural Statistics, Government of India Publication.

Therefore we can say that 5 acres of dry land and one acre of wet land may not be uneconomic but is sufficient.

II. Another criticism is that recipients will be in the grip of money-lenders because they will borrow money to invest on the land. The criticism is well founded but one thing should be kept in mind that we are not thinking in terms of western agriculture where all the farms are well mechanised. In agriculture, land, labour and capital are important elements, land we have got (from donation), labour is personal and in the name of capital very little money is invested. Co-operative societies should be established in the villages from where the landless labourers can get money on a very nominal interest. Rs. one crore has been sanctioned by Bihar Government to help landless labourers. Similar steps are also taken by U.P. Government and other State Governments.

III. It is feared that recipients will give their land to others for cultivation, but it can not be so because before giving the land four tests are applied which are as follows:—

a. poverty of the person.
b. landlessness of the person.
c. capacity of the person to till the land, and
d. desire of the person to have the land.

Those who answer these tests are only given the land.

IV. The biggest criticism regarding Bhoodan is the delay in distribution of land. The country is short of food and the delay in the distribution of the land may result in loss to the country which the country at this time can hardly afford. This delay occurs because of finding suitable and deserving persons and if we do hurry in it, the land may go to the wrong persons which will eventually mean end of this Movement. Further, those who think that delay may result in a fall in production are not justified because it is clearly mentioned in the precautionary measures of application form that every donor will have to continue to cultivate the land till it is not distributed. Thus the question of the land remaining out of cultivation and the consequent fall in agricultural production does not arise.

V. Some critics previously were of the opinion that Vinoba got land in Telangana district which was the centre of communist activities and where many landlords were beheaded and therefore the rest donated land in order to save themselves. But this opinion had to be revised when in peace loving states like U. P., Bihar and Orissa, the collection reached considerably higher limits.

VI. Another doubt is expressed by many on the ground that nearly 50 p.c. of collected land is of a disputed nature involving litigtaion and about 70 p.c. of the total collection consists mostly of unfertile land. Regarding it no correct and reliable statistics is available and the above percentage is only a guess.

VII. Another view expressed against this Movement is that it has created land hunger instead of supressing it. But it should not be the case, for this we want to say that supressed fire is a greater potential danger than the burning fire.

VIII. The most important fear which arises is that it will compete the Government plans as ceilings and consolidations etc. As far as the question of ceiling is concerned it can not hinder its way, because ceiling means upper limit and in our mind any piece of land given to the landless labourer will be more than the limit. (30 Acres in U. P.).

IX. Those who say that Vinoba started his Movement to supress the communist

activities (an effective counterblast to communist activities) in India are not correct. Because the percentage of land collected in Communists affected areas for example Andhra 1.2 Kerala 2.8. W. Bengal, 0.39, is very insignificant in comparision to non-communist areas like U.P. 5.3, Bihar with 39.9, Orissa with 6.4, Madras with 1.4% of the total cultivated area donated to the Movement. Therefore this argument has no base.

X. According to some the Movement amounts to a failure because since the start of Movement in 1951 only 43 p.c. of the target land had been collected by the end of 1956, when the target was to be attained by March, 1957. This they could not capture. As already mentioned, persuasion always takes time. The question then, arises why this limit was fixed to create psychological basis for the workers to work hard. The absence of time limit would have resulted in the lack of a missionary zeal on the part of the workers.

Therefore, whatever doubts are expressed about Movement, they are of temporary phase. This Movement will play a significient part in solving the land problem in India which canot be solved single-handed and it is necessary that the Government must help at least in the work of distribution.

SUGGESTIONS

(1) The Bhoodan Committee should be divdied in three sub-committees. The duty of one should be to collect the land only, while the work of the second Committee should be to reclaim or to improve the land (it is so because the major portion of the donated land is unfertile and also the landless labourers are poor and they cannot do any improvement on the given land). But it all requires money, therefore the duty of the remaining committee is to collect money. If the improved or fertile land is not given to the labourers neither the labourers will be satisfied nor will there be any rise in the production. The only significance of the Bhoodan will be a change in the ownership of the land.

(2) The members of the Bhoodan committee should by very strict in distributing the land. They must see that the donor may not get the land again in some other's name. Therefore to check this tendency proper enquiry should be made about the donee in the village before giving him the land.

(3) The Movement should be carried a well planned scheme, because without it, it will be just like bullocks without yoke and they can move in any direction. We are laying emphasis on it because its origin is all of a sudden and the founder was never aware of this fact.

(4) The pace of the distribution of the land should be quickened otherwise the dissatisfaction in the people will arise and it will be a great hindrance in its way. The idea of first pooling and than distributing should be given up.

(5) Government aid either in the shape of workers or money should not be refused but it must be accepted without any condition and Government control. It must be clearly explained that it will be used according to the condition and need of the country.

CONCLUSION

Bhoodan has been praised not only in India but all over the world. Some have called it a revolutionary movement, while the others think it a noble one, still

others think it to be the only counterblast to the communist activities in India. Whatever it may be called we have no hesitation in saying that Vinoba's land movement will go down in history as one of the most potent landmarks in the struggle of the good with evil, of non-violence with violence and of the forces of peaceful construction with the frenzy of hatred and destruction.

Farmers' Programme Of Soil Conservation

By: Y. C. ARYA

The agricultural backwardness of our country is directly attributed to the heavy soil erosion. Heavy floods are also caused in many big rivers of the country, because of the eroded soil that has deposited in their beds. The problem of soil erosion must be tackled effectively in our country lest we should reach a state of complete ruin in a few years.

The soil erosion and depletion has to be checked by systematic and effective measures of soil conservation. Any measure that is capable of maintaining the productivity of land against the forces of wind and water is an effective soil conservation measure. Unless and until these measures are taken individually, as well as collectively by all the farmers throughout the length and breadth of the country and on every acre of land, no number of other policies for a permanent agricultural improvement will bear fruits.

What Led To Heavy Erosion?

If we try to analyse the causes that have led us under so great a threat of erosion, we find that our country has some special reasons for it. In the first place very little effort has actually been made to solve this problem of soil erosion. It has been only recently realised at higher levels that this problem shall have to be solved, but till now no satisfactory efforts have been made to make the actual tillers of the land realise this problem. Whatever means and ways are suggested often do not prove practicable for the average farmer. It is often overlooked that unless the actual tillers of the land give their co-operation in solving this problem, much cannot be achieved.

The ignorance of the farmers about the disastering effects of the soil erosion is also responsible for letting it go unchecked and consequently coming to the present stage. Though the farmers in our country value and venerate soil as their mother but they remain completely ignorant of the tremendous loss that they have to suffer due to the menace of erosion.

The defective land tenure system that existed in our country has also been resposible in-as-much as, no efforts were made by the farmers to conserve the soil. The majority of land was ploughed by farmers who were transitory type of tenants and had no interest, whatsoever in the land. This led to extensive exploitation of land for maximum gain and facilitated erosion.

The excessive cattle population of low breed has considerably resulted in overgrazing of land, specially in parts of U.P., West Bengal, Bihar, and Orissa. Non-existence of pastures along with this heavy overgrazing has resulted tremendously in aggravating the problem of erosion.

Suggesting Conservation Practices

It is difficult to give a rigid plan or a set of practices to be followed by the farmers to conserve the soil, because the conditions vary a great deal. However, there are a number of basic factors which apply to the whole of the country in general and should not be overlooked. The main thing to be emphasised for any plan of soil conservation in rural areas should be its practicability by the farmers. The probable difficulties in undertaking the soil conservation programme should be viewed from the angle of the common farmer. This practicability will be governed to a great extent by the economic feasibility of the programme. The farmers of our country held a general holding of five acres of land. These are not economically very sound. They try to get as much out of the land as possible. Any recommendation of the plan that is going to put on them extra economic pressure shall not be practicable.

The programme should also be simple to follow. The average farmer is illiterate and is non-technical. Any type of complicated designs and procedures will have no scope in such a programme.

Along with the cheapness and simplicity it should be equally effective. The farmers are conservative and if it does not reveal to them prompt results, it is feared the programme will not be followed for a long time.

The Suggested Programme

... The farmer's programme for soil conservation as suggested shall fall under two broad heads:—

1. Stopping faulty practices.
2. Adopting improved practices.

(1) **Stopping faulty practices:** There are a great many number of practices that are being followed by the farmers and which result in considerable soil loss. There is almost no gain to the farmers by following these practices but are being followed only by way of their old convention and practice. The following are the some Important among them and their practices should be discouraged:

(a) **Ploughing Along the Slope:—** In most of the village lands it can be easily noticed that the ploughing is done along the slope. This leads to a very heavy run off and soil erosion is great. If the ploughing is done across the slope, the furrows and ridges made, shall tend to reduce the run off and will check the speed of the flowing water on the slope.

(b) **Cultivation of Potato on Hills:** —On hills, especially in the province of Assam, the cultivation of potato is very defective. After the forests are cleared off, the ridges for potato are made along the slope resulting in severe erosion. If the ridges are made across the slope, considerable benefit can be brought about.

(c) **Stubbles in Fields:**—After the crops are harvested it is a general custom that the stubbles are taken out of the fields. If the stubbles are allowed to remain in the fields, they will go to form enough organic matter to the soil. This will increase the fertility of the soil and will help to check erosion.

(2) **Adopting Improved Practices:—**

Adoptation of a number of improved practices will also help in controlling erosion. These improved practices are of two kinds. (a) Agronomical and Cultural practices. (b) Mechanical practices.

(a) **Agronomical & Cultural Practices:**—Contour Farming, is one important practice that needs to be adopted by the farmers. This is very effective in controlling erosion and can be easily practised by the farmers on their fields. This simply means ploughing or cultivating sloping lands on the contours. A contour is an imaginary line on the surface of the earth connecting points of the same height. Due to lack of technical assistance it is difficult for an average farmer to make contours on their fields and to follow cultural practices on them, but even if the cultural operations are done across the slope it shall be quite helpful.

(b) **Contour Planting & Strip Cropping:**—On short gentle slopes of fields, erosion can be controlled effectively by contour planting. When this practice is followed, the cultivated crops act as small ridges to slow down the speed of the run off, thereby its power to displace and carry fertile soil. This practice too can be easily practised by an average farmer.

If the slope is still more, say upto 5-6 per cent, it is better to follow strip cropping. This term, as is understood in western countries has little scope in the fields of our country. This is, because the fields are small and scattered and it is not quite possible to cultivate so small fields in strips. However, if strips of smaller width are used it may be practised. The field should be divided into strips of varying width according to the soil and slope. One of the strips should be of a row crop and the next to follow it, of a close growing crop.

A farmer in general likes to have as much area under row crop as possible because important among them are cash crops i.e., Wheat Maize, Potato, and Sugarcane. Growing only of row crops leads to heavy soil erosion. Therefore, if a greater part of the sloping land can not be put under close growing crop, at least one third of the field should be kept under the cover crops. Small strips of 7-8 feet width of close growing crops (which may as well be paying) such as Moong, Urd, Cowpea, etc., if grown only on the lower side of the field will also prove quite effective. However to make them still effective it shall be necessary to make one small bund at the upper side of every strip by a double mouldboard plough.

(c) **Rotation of Crops:**—Though, there are some rotations that are generally followed by farmers, but most of them are not effective, because they do not include the growing of Cover crops for a long season. A well planned rotation will help a great deal in maintaining the fertility of soil and will consequently redcue the erosion to a great extent. Suitable rotations that keep a fairly good percentage of land occupied by close growing and leguminous crops are effective in checking the erosion. This will cost him nothing extra. Some of the rotations given below are quite effective in the Indo-Gangetic plains and farmers can adopt them:—

(a) One year's rotations.

Khairif	**Rabi**
Early Paddy	Gram of Peas
Jowar	Gram
Green Manure of Sann Hemp	Wheat
Jowar & Arhar (Mixed)	Arhar (Continued)
)war	Barely.

(b) Two years' rotations.

Jowar — Arhar — Arhar Continued — Green Manur — Paddy.

(c) Three years' rotations.

1. Early Paddy — Peas — (Jowar & Arhar) — Green manure — Wheat or Barley.

2. Sugarcane — Paddy — Peas.

3. Green manure — Sugarcane — Follow — What - Cotton.

4. Paddy — Wheat — (Jawar & Til & Arhar) —Arhar Continued.

(d) **Summer Ploughing:**—After the Rabi crops have been harvested there is very little that the farmer does to the field. There are heavy winds during the summer, which carry away the soil particles with them and causes serious erosion. If the farmer allows the soil to be ploughed during the summer, it will leave the soil in clods and the soil particle will not be carried by the winds easily. This will also ensure better absorption of water when the first rains come up. Thus there shall not be so much of run off at that time which would have otherwise caused heavy erosion. The summer ploughing will also enable the farmers to sow their crops earlier as such the land shall not remain uncovered during the months of early rains, i.e., July and early August. Thus, the practice of Summer Ploughing, which only demands the possession of a Mould board plough with the farmer, can help him a great deal to save his soil.

(e) **Fertility Methods:**—To reduce the soil erosion, it is necessary to maintain the fertility of the soil. A good fertile land will erode less than an unfertile one.

The maintenance of the fertility has been a problem before the farmers in our country. Although farmers realize by way of their conventions, that some sort of manure need be added into the fields, but unfortunately it is not practiced. The cow dung, which is an available manure, is seldom used as manure and is often burnt as fuel.

Weeds are allowed to remain in fields. They take up the plant food of the soil and decrease the fertility of the land. This renders the soil easily erodable. To maintain the fertility, proper weeding operations are essential.

The practice of taking green manuring crops can be easily taken up by the farmers. This helps to maintain the fertility of the soil.

Under some conditions, too much pressure on the land is usually put. Crops after crops are taken on the same piece of land, without any special attention or effort to maintain its fertility. This causes deterioration of the land which can easily be subjected to severe erosion. This pressure on the land must be avoided. It shall be wiser to leave the land fellow in one season or the other. A better course is to take green manure crops in one season.

MECHANICAL PRACTICES

The construction of big structures like a Soil Saving Dam or a Terrace is undoubtedly beyond the capacity of an average farmer. Nevertheless, there are some structures that can be built up by his own labour with very little cash expenditure.

(a) **Contour Trenching:**—This is a method of making trenches across the slope, along the contours. This is quite simple. Though difficulty is felt by the farmers in locating the contours due to lack of technical assistance, but an intelligent farmer by seeing closely at the field can judge as to which way should he make the trenches across the slope. These trenches can be made in the first place, by a double mould board plough and then should be deepened with 'Kudali or Phowras'.

The general size of trenches should be about 1' X 1' to 2' X 2' and should be placed at a distance of about 8 feet to 20 feet across the slope. After the Kharif season is over these trenches may be filled back or if they are spaced far enough, may be left unfilled.

(b) **Contour Bunding:**—This is a slightly expensive method but is still within the reach of a willing farmer. This consists of making 'Bunds' along the contours. The bunds are made small in size. It is best to construct the bunds along the contours, but if it is difficult to locate the contour, bunds constructed merely across the slope are effective. The procedure of constructing the bunds is best carried out by means of manual labour. The soil is removed from the catchment area of the bund and a ridge is made. The height of the bund should be sufficient to collect the flowing water behind it. If the run off is high, a small outlet can also be provided to carry the excess run off. The height of the bund is determined by the spacing of the bunds and the slope of the land. However bunds of 3 feet height and 2 feet width at top with side slopes of 1½: 1 are quite satisfactory.

IMPLEMENTATION OF THE PROGRAMME

The success of any soil conservation programme for farmers shall much depend on how it has been planned and implemented. Anyone interested in carrying out such a programme should fully realize that in this, human behavior is involved to a great extent, and as such needs delicate handling. Analysis and study of existing situation is to be done before implementing the programme. The existing slope, topography, kind of soil, the degree of erosion, will have to be determined before deciding upon the particular practices to be recommended. This will also require a study of the general land use, the pressure on land, the availability of pastures for grazing land and the various cultural and agronominal practices being followed. An analysis of the economic status of the farmers shall be helpful in getting an idea of the expenditure that they can incur for the conservation programme.

It will be on the basis of such a survey, that the detailed objectives of the programmes will have to be based. As a philosophy of soil conservation programme, it should be clear that the ultimate goal is not only to have physical acheivements like the construction of bunds, but is to make the farmers realize the importance of soil conservation and then to motivate them to take up soil conservation practices. This is important, because of the simple fact that the phenomenon of soil erosion is one, which is continual. A check for a short period of one or two years, without constant attention is no solution. It has to be fought till the land is to be tilled. This needs a true sprit and a desire to conserve the soil from within the farmers. Therefore, if the programme of soil conservation is launched, it shall be necessary to create a felt need in them. Since erosion in fields is a gradual process its harmful effects usually go unnoticed, and its aftereffects such as loss of fertility and low crop yields are seldom linked with it. The need of checking erosion thus remains unfelt., which has to be made felt for the success of the programme. This will need extensive propoganda and education through various Extension Methods to show and explain the disasterous results of soil erosion.

In short, the implementation of the soil conservation programme in any area should be done with the correct type of guidance and with a thorough under-

standing of the village reaction. Just the former is not enough. The programme could be called a real success only when as a result of motivation, every farmer practices soil conservation, practices on every acre of his land and realizes that in this problem of erosion, he has to co-operate with others to set up a joint front against its menance, for erosion knows no boundaries of fields, village, or individuals.

Prospects Of Agricultural Co-operative Organisations In Cuttack

By : DAYANIDHI SAMANTARAY & M. MANIKYESWARA RAO.

A study was undertaken to find out the prospects of co-operative organisations in agriculture in six villages taken at random viz., Bhubanpur, Jagatpur, Patpur, Kulia, Biribati and Gatiroutpatna of Cuttack district, Orissa.

The district can be divided into three distinct tracts, viz., the deltaic tract, the marshy sea-cost strip and the hilly region. The villages studied belong to the deltaic tract which is an alluvial plain due to the deposits of great rivers. There is an extensive system of irrigation to save agriculture from drought conditions. A great variety of crops such as rice, jute, pulses, sugarcane and potatoes and other vegetables are raised by farmers.

According to the District Census Report, 1951, density of population in the Sadar sub-division, which belongs to the deltaic tract, is very high and there are 753 persons per square mile. Out of the total population of the district 75 per cent of the people depend upon agriculture. This indicates that the man-land ratio is very low.

In fact in almost all the villages studied it was found out that the maximum landholding does not exceed ten acres. Because of these special characteristics of this deltaic region where there is presumably the need for and the possibility of co-operative organisation, we studied the prospects of the same in the aforementioned six villages.

Search For Co-operative Life

At the outset we began to examine if any co-operative way of life exists among the villages, which might lead to evolving co-operative institutions like co-operative credit, marketing, farming etc. This study was important to show that, unless this exists, introduction of co-operative institutions will be an imposition and they will be bound to fail due to the lack of expected response and co-operation.

In course of our study we observed that there is co-operation among the agriculturists with regard to the use of draught animals, use of bullock carts, irrigation, watching of fields, use of implements, marketing of produce, procurement of credit etc. In the villages generally most of the farmers have their own bullocks. Sometimes a peasant may borrow somebody's bullocks for agricultural operations. The owner lends them if he has nothing to do with them at that moment. Sometimes poor people co-operate in the purchase of draught animals. One man purchases one and the

other man purchases another. As two bullocks are necessary for working a plough both of them enjoy the benefit in co-operation.

All the farmers need irrigation facilities and there is co-operation in this field. They do not object to water flowing through their fields to others' fields. Co-operation can also be seen in case of labour. A farmer may work in another farmer's field for a day or two and the latter then works in the former's field in exchange. They also co-operate in restricting the movement of cattle when cereals are grown. But when cash crops are grown by a few and not by all it becomes essential for the growers to watch the fields and co-operation is seen here. Sometimes farmers borrow for a days ploughs, bullock carts and other agricultural implements if the owners do not need them at the same time. Generally the farmers purchase their own implements as they are not very costly in comparison to bullocks or carts.

Subsistence Villages

Generally the villages are subsistence villages and they do not have much to sell. Only in case of cash crops like jute, potatoes etc., marketing is necessary. A jute co-operative society at Kendupatna helps jute growers of the two villages in marketing their produce. But generally speaking there is no co-operation among farmers in marketing. So far as credit is concerned, in some villages there is no mutual accommodation and in some villages it exists. Sometimes the middlemen who purchase jute and potatoes from the peasants give money in advance, if they need it.

In cultivation, group action is evinced and here caste is no bar. Generally people do not prefer to co-operate with people of their separated family members or their relatives. A Brahmin rather prefers to co-operate with an untouchable as the latter is very sincere in his work. One thing can be pointed out in this connection. In case of cash crops and not in case of cereals, group action is existing. The reason is that cereals do not require as much labour, capital and constant supervision per acre as the cash crops.

There are four types of groups existing. The first type arises when a group is formed by a land owner and some labourers. The second type arises when some labourers co-operate to form a group. The third type arises when farmers co-operate in case of their own individual holdings. The fourth type arises when some peasants co-operate to form a group to take land on lease from the Government. In case of the first type the owner provides land and capital and the labourers provide labour. From the gross yield the owner gets share for his land and capital and the labourers for their labour. The surplus is then distributed equally between the landlords and the labourers.

In case of the second type some labourers get land on rent from a landlord. They co-operate in cultivation of the rented land and provide capital and labour. From the gross produce rent is paid to the landlord. Then the members are paid in kind for their capital and labour. The net produce is then equally distributed. In the third case, the peasants provide land, labour and capital. For contribution of land, labour and capital they are paid from the gross produce and then the net produce is equally distributed. In the fourth case, the peasants take some government land on lease and contribute capital and labour. For contribution of capital and labour they are paid from the gross produce and the net produce is then equally distributed.

In the above four cases group action is existing because of following reasons:

In the first case, the labourers cannot get land and capital unless they co-operate with the owner. The owner also gains some advantages. If he is to cultivate individually he will have to make personal supervision all the time and he will have to pay wages at various stages of agricultural operation. But, because of group action these difficulties do not arise.

In the second case, unless the labourers co-operate, they cannot get land from the landlord and they also cannot provide necessary capital for cultivation purposes. In the third case, when everybody contributes land, capital, and labour, risk for everybody becomes less. In case of sugarcane cultivation, unless there is such farming, one man cannot hire a sugarcane crusher and tubes for irrigation. In the fourth case, no single man will be able to get Government land on lease as a lot of money is to be paid. He, also, will not be able to cultivate so much land and he cannot provide enough labour and capital.

The groups that are formed in one year may not continue for several years. When the members of the group do not find any surplus after they pay for capital and labour, they do not feel enthusiastic enough to continue in the next year. Sometimes they incur losses due to bad crops in a year or two. As poor peasants cannot withstand the loss of one or two years, they do not feel enthusiastic enough to continue that group action next year. There may arise misunderstanding among the individuals forming the group. They may feel there is misappropriation of money by the most clever members of the group. Here change is brought about in case of membership or group action ceases to continue. In case of losses in a year the labourers in the first group do not pay towards capital. In shuh a case, the owner does not like to contribute capital when the same labourers or other labourers request him next year to contribute land and capital for group farming.

People generally pay more attention to their own individual farming. At the time of some agricultural operation a member first finishes work in his own field. Then only he can think of working in the fields cultivated by the group. When two persons are ready for work the third man says he cannot go and when the third man is ready the second man says he has some other work. This leads to breaking up of groups in the following year.

The present study shows several systems of co-operation existing in these villages. Co-operative way of life seems, in fact, to be continuously inherited by each successive generation in India. It need not be emphasised that there is need for co-operative credit, marketing etc., in rural areas but that is not enough. There should be the possibility of success in these fields. Our study, of course, does not disappoint us as these existing systems of co-operation and systems of mutual aid among rural people can be channelled into institutional patterns with definite success.

Today there is a talk all-around the country to establish co-operative farming. In fact, the Second Plan puts much emphasis on it. Many factors may be taken into consideration to see if there is any possibility of co-operative farming in these villages. There are, of course, certain conditions which may be considered favourable. People are very poor and there is no great disparity in landholdings as the maximum holding does not exceed ten acres. It has been shown that there are four types of group cultivation existing in these villages. These may be channelled into co-operative organisations. Co-operative farming is objected to on the

ground that there is no individual attachment for land and pooling of land is not possible. We feel, probably, this aspect of the problem gets a bit undue emphasis as we found poor farmers very much enthusiastic for co-operative farming. They seemed to be prepared to give away their small strips of land if they could be assured to get more than what they get at present.

But this does not mean that introduction of co-operative farming is an easy matter and there are no unfavourable conditions. It was pointed out to us that to remove uncertainty Government should demonstrate in big fields that there could be more production by better operational techniques than is possible in small holdings. And besides if the Government provides credit facilities, better machines, manure etc., it can make out the possibility of co-operative farming.

Difference in fertility and negligence of some of the farmers to improve their land were also pointed out to be some of the unfavourable factors. These problems should not be lost sight of if co-operative farming were to be introduced. In the present context of excess pressure of population on land and lack of subsidiary employment avenues in these villages proposals of co-operative farming (if they mean all introduction of machinery and too much rationalisation of agriculture) will give rise to the serious problem of unemployment. Unless avenues of employment are opened for them in the form of cottage and small scale industries etc., introduction of co-operative farming cannot be regarded to be a practical proposition.

To conclude, in the villages there is the need for and the possibility of co-operative organisations. In the villages, system of mutual aid and the co-operative way of life that obtain can be channelled into institutional patterns with success. Untill proper climate is created, co-operative farming should not be introduced. Nevertheless, a beginning may be made with co-operative better farming societies.

Impressions Of Garudeswar Intensive Development Area

By : N. C. Mehta

The people are backward and whatever they suffer is due to their utter laziness. They have forgotten their own culture of jungle—care-free and active life. They have lost the activeness of jungle life where they had to live dangerously and their care-freeness has turned into laziness.

They have lost all their lands to the moneylenders due to their drink habits. While they go to borrow in a drunken state the money-lender would get their thumb impressions on any amount of money, land or other belongings. Now these money-lenders have become big landlords possessing more than thousand acres each. Further, these landlords used to get these backward people to work on their land by supplying them with intoxicating drinks. By drinks only they were tempted to work.

Lethargic Nature

Now due to strict prohibition, the economic situation of these backward people has been greatly improved. But they have become so lazy that no monetary gain would induce them to work, if they have sufficient food in store. They go to work only after 11 A. M. and work leisurely uptil 5 P. M. for which they get

6 to 8 annas as wages. They would not care to start work from 8 morning even if one offers them Rs. 2 as daily wages. Most of these people have got small pieces of land 5 to 10 acres each, from which in good years they get sufficient food grains for the whole year. And for other necessities they work in forest to get 8 annas daily wages. And when they earn enough to buy their necessities they give up work.

Before Independence, the driving force to work was hunger, and the landlords used to extract work from them by supplying intoxicants. Now they are a contented people since their requirements are few and living is quite simple.

Mentally, physically and meterially, they feel their inferiority complex. And to cover this complex, they wear gaudy dresses to show off their superiority in their dressing tastes and make-up of hair, which they learn from cinema. So it is hard to make them wear simple Khadi dresses.

Most of the these people earn well during the season time, and during that time they eat like gluttons - 4 or 5 times a day and dress like a dandy. And during off season they starve and then go in for search of work.

We have two extremes in our country. The town dwellers, who are grabbers, hoarders and mad after money, always, unsatisfied. Day and night they work and plan to get more and more money. On the other side we have backward people contented in life with their little income. They would not care to work an hour more if they can earn to keep themselves by labouring only 4 hours a day, only their desire to look well-dressed or to spend for cinema make them work 5 or 6 hours a day. If their dress is cheapened and simplified they will work less.

Any work is a drudgery to them. From morning to noon they sit idle, talking without caring for anything. Women and children also smoke. This is a contented life with a vengeance. The problem is, how to make them ambitious and whether it is good to make them discontented and ambitious? To us the higher standard of living means cars, bungalows to live, foreign travel and college education for our children. To them higher standard of living is gaudy clothes, cinemas, plenty of leisure and plentiful supply of introxicating drink.

The territory is surrounded by Vindhya mountain ranges, so the water is very heavy, which usually is the case in a mountainous area. This water is the cause of chronic constipation. Almost all the persons residing in this area are suffering from chronic constipation, and this is one of the reasons of their constant moroseness, resulting in laziness. When the liver is sluggish, every part of the body becomes sluggish. The bountiful nature has provided these people with the natural cure for constipation. But the cure is misused, and the Government has prohibited the use of this cure. The cure is the fresh and invigorating drink Nira from Palmyra.

Further due to chronic constipation, most of the people are suffering from skin diseases, and leprosy is on the increase. The Government has started a centre for checking this disease in this area. The man-in-charge of this centre, told me that the diet of the people lacks many nutritive requirements. Further they are too poor to afford milk and such nutritive foods, to strengthen their resistance against the disease. Nira is the only answer to this problem, but no new centres for Nira are allowed in the Gujerat area, where the population was used to Toddy drinking during the pre-prohibition period. Further the foodstuff of the poorest and cheapest quality is dumped by the un-

scrupulous manufacturers, the edible oils are adulterated with mineral oils and the grains are of the poorest quality and mostly rotten. The people are after cheap articles only, since their aim is to fill their belly and not to get the nutrition. And they are too dumb and backward to complain about their lot. While the police is more vigilant against prohibition law-breakers than against injurious adulterations. Foods which are unfit to sell in the municipal areas of big towns, are sent in these backward areas for disposal.

On one side the prohibition has saved the family of these classes from total ruin. They have lost everything to the money lenders, but now they are losing whatever is left i.e. their health and morals due to strict laws of prohibition, enforced by ill-paid and unscrupolous police.

My suggestion is that Nira should be allowed freely, so that these people can get the wholesome and nutritive drink cheaply and solve their health and deficit diet problem easily.

The people of this area are living on the fringes of the forest area, and they are used to obtain the free use of fuel wood which they used to cut and bring from the forest. During the pre-Independence period they were getting the fuel for their own use and the bamboo for their cottage industries almost free, or in return of forced labour. Each family had to give about a month in an year for the upkeep of the forest, and in return they were allowed the free use of the forest products for their personal use. Immediately after Independence, the authorities tried to enlist the labour of these people by monetary payment, but no money could tempt these people to authorities had to demand their labour by force for a few days in an year to maintain the forest, otherwise the development of forest, was impossible.

Now these people are forcibly made to work against a nominal payment of a two-anna allowance, and still they are not allowed the use of the forest products as they used to do during the pre-Independence period. To them the forest products are gift of God as sun-shine, water and air.

The Government wants to conserve the forest, so it denies the free use of the forest to the people. But, since motor roads are increasingly being constructed in this area, coal out of wood is allowed to be made in a very large scale. Monopolies are thus given to coal merchants. So by this way the forests are depleted by the monopolists. So the motorable roads are the causes of commercialisation of the forest, and the people feel that this is the reason why forest products are denied to them.

It is also true that, when the forest laws were not so strict, and the motor roads were constructed, the forest people started to cut down the trees in thousands, to sell the same to the merchants, who transported the same by trucks.

After each monsoon, the forest roads become impassable due to heavy growth of vegetation, so the local people put the same to fire, thereby destroying the whole forests every year. From ancient time when the vigorous forest was encroaching on the villages, the people were burning down the forest. And since then they are taking vows to burn down the forest when there is illness or disease in the family.

However all these problems could be solved if there is proper co-ordination between the government department and the social worker. Due to the ignorance of the people, and unimaginative laws of the Government, people are very much dissatisfied, and the advantage of this dissatisfaction is taken by the Communist Party to agitate in this area.

Governments And The Cottage Industries

By Prof. C. B. MAMORIA.

In recent years the attitude of the Government towards the cottage and small scale industries has undergone a welcome change. The new helpful policy was originally announced in the Industrial Policy Statement of 1948. In the First Five-Year Plan it went further for such industries being assigned the central place in industrialisation as well as rural development. The Second Five-Year Plan places the main reliance on such industries for increasing the supply of consumers goods and for the expansion of employment in the industrial sector.

The following specific measures have been taken by the Government for the encouragement of such industries:—

A. **Establishment of various All-India Boards:**

The Government have established several Boards or organisations. These have been given large powers of initiative and are provided with adequate funds to function effectively. Each one of them has its own sphere to look after.

(i) **The Cottage Industries Board** was the first to be set up. This Board has by now practically completed a review of the existing cottage industries in the country with a view to developing them further.

(ii) **The All-India Handicrafts Board** constituted in November 1952 has the object of improving and developing production of handicrafts, of promoting their sales at home and abroad; of co-ordinating the activities of the various State Governments, relating to cottage industries, of examining and advicing how cottage industries can be co-ordinated with large scale industries. A sum of Rs. 60 lakhs was provided in 1955-56 for assistance to this board. This Board has assisted research in new designs and patterns and in improved processes, organised a survey of marketing of handicrafts and arranged for exhibition of handicrafts.

(iii) **An All-India Handloom Board** was set up to advise the Government, on the problem of the Handloom industry; to examine scheme for its development and improvement; and to make recommendations for assistance from the handloom cess. The Central Government sanctioned Rs. 4.5 lakhs in 1951-52 and Rs. 4.6 lakhs in 1955-56. The total expenditure amounted to Rs. 11.1 lakhs during 1951-56.

(iv) **The Khadi and Village Industries Board** was started in 1953. It is the chief body for the village industries. It prepares and organises the programmes for the production and development of khadi and village industries including the training of personnel, manufacture and supply of technical equipment, supply of raw materials, marketing and research. It prepares plans for the development of such industries like village oil industry, gur and khandsari, leather industry, soap making with neem oil, paddy husking, palm gur industry, flour chakkies, bee-keeping, cottage match industry and hand made paper. The total expenditure amounted to Rs. 12.5 crores during 1951-56. This Board has set up technological institute for village industries and has also established central and regional institutions for training of workers.

(v) The Central Government, also set up a **Small Scale Industries Board** in 1954, to frame and implement programmes for the development of small scale industries. Under the aegis of this Board four Regional Small Industries Service Insti-

tutes at Calcutta, Bombay, Madurai and Faridabad, have been set up to provide technical services, advice, and assistance, marketing help and promote patterns.

(vi) **The Coir Board** has been set up to promote the formation of co-operative societies for the collection of husk and the production and supply of yarn.

(vii) **Silk Board** has been set up for the development of sericulture and silk industry.

2. **Establishment of Directorates of Cottage and Small Scale Industries**

All the State Governments have passed rules or Acts to regulate State Aid to industries. State Governments have constituted separate Directorates of Cottage and Small Scale Industries. In 1954, a special Development Commissioner for Small Scale Industries was appointed at the Centre.

3. The Government has also accepted the principle of levying a cess on the corresponding large scale industries to assist cottage and small scale industries. It has also accepted the principle of affording temporary protection to such industries by reservation of spheres of production or through a subsidy. Accordingly, a cess of one pice per yard on mill made cloth has been levied which is expected to yield. Rs. 6 crores per year. Also certain lines of production have been reserved (such as in the case of **Sarees** and **Dhoties**, mill can produce upto 60 per cent of their respective production). A cess on mill oil is also contemplated and the extension of the principle of reservation is contemplated in a number of industries, e.g., in oil industry edible oils to be produced through cottage industry and non-edible oil through oil-mills; and in regard to processing industries, further extension of large scale industry might be disallowed except when the Government of a co-operative organisation propose to establish a unit. Subsidy is also given from 9 pies to 1½ annas in the rupee on the sales of handloom cloths.

Marketing of Products

The demand for the products of such industries is sought to be promoted by such means as holding of exhibitions, and opening of sales depots and emporia. The Central Cottage Industries Emporium was set up in 1949. Some of the State Governments have also set up their own emporia as the U.P. Handicrafts in U.P., the emporia of Madras Handloom Weavers Provincial Co-operative Society; the emporia and sales-depots of the Provincial and Industrial Co-operative Association of Bombay; the Bihar Cottage Industries and the Orissa Textiles Marketing Organisation and Rajasthan Cottage Industries Emporium may be cited as some of the successful instances.

Some of the State Governments like those of U.P., Bihar, Kashmir, Mysore, W. Bengal, Andhra and Rajasthan had taken initiative in the early days by participating in foreign exhibitions and canvassing business through special agents or trade commissioners. The Central Emporium, situated in the capital of the country, attracts a large number of foreign visitors, tourists, commercial travellers and members of delegations and diplomatic missions. It often holds the following special exhibitions to provide wide publicity for Indian products. — (1) Old Indian textiles (2) Kashmir products, lacquer-ware and papier machine toys (3) Products of Lucknow School of Arts and Crafts, (4) Wool and Woollen products; (5) Shellac and Mica Products; (6) Farrukabad Prints; (7) Banaras Silk and Zari products; (8) U. P. brasswares, (9) Rajasthan products-prints, wooden toys, marble and enamel work, ivory carvings etc., (10) Handloom textiles and (11) Special Indian Handicrafts. It also

selects goods for display and sale in the two international airports of Delhi and the Trans Atlantic Luxury Liner "S.S. Queen Mary". It sends goods to embassies and consulates at New York, Alexendria, London, Kabul, Ceylon, Bangkok, Dacca. Millan, Washington, Czechoslovakia, Sweden, Finland and Lisbon etc.

Indian goods have demand in countries like U.S.A., Canada, Australia and England. According to the Director General of Commercial Intelligince and Statistics, Calcutta, these goods are exported in appreciable quantities; artware and fancy wares; bags, belt, metal articles, handloom textile products, ivory carvings, jewellery and imitation jewellery; lacquored wares and papier machine goods, silver ware and filgree articles made of gold and silver, sports goods and stone carvings and toys.

Lack of Uniform Quality

As already said above, want of uniform standard of quality in the products is the greatest drawback of cottage industries. Improvement is sought to be affected in this respect by introducting standardisation and quality marking. The Indian Standards Institution has issued more than 250 Indian Standards relating to all types of products of importance of which the following relate to cottage industries.

National flag of India, Seed-lac; Shellac; tamarind kervel powder; mild steel and brass door bolts; gate and shutters, hooks and eyes; door handles; blue-black and red ink powder and tablets; fluid ink for registration and for cheques and records; table common salt; pitchers; grading of raw jute; padlocks; siding door bolts etc. The state has provided technical assistance by utilising the services of the experts, where necessary. For this purpose there are at present a few research centres attending to the problems of small scale artisans exclusively. They are :—

(1) Village Industries Experimental Workshop, Poona.
(2) Village Industries Research Laboratory, Poona.
(3) Dyeing and Printing Laboratory, Poona.
(4) Hand made paper Research Laboratory, Poona.
(5) Ceramic Laboratory, Khanpur, District Belgaum.
(6) All India Village Industries Association, Maganwadi.
(7) The Cottage Industries Laboratory, Nagpur.
(8) All India Spinners Associations, Wardha.
(9) Sriniketan Vishwa Bharati and Khadi Pratisthan, Sodepur.
(10) Orissa Poor Industries Cottage. Cuttack.

There are also a number of other research centres which attend to the problems of both large scale and small scale industries, such as the following.

(1) Textile Research Institute, Poona.
(2) Industrial Chemist Laboratory, Matunga and Baroda.
(3) Textile Research Laboratory, Poona.
(4) The Government Institute of Leather Technology, Madras.
(5) Government of India Central Research Institute, Guindis.
(6) Government Sericulture Research Station, Kollegal.
(7) Government Ceramic Factory, Gudur.
(8) The Schools of Arts and Crafts such as those in Madras and Calcutta.
(9) Various National Laboratories.

(10) Bengal Ceramic Institute, Department of Glass Technology.

For the development of small scale industries, the Community Projects Administration has appointed blocks level industrial officers in a number of Community Projects and National extension blocks. An intensive development programme has been introduced in 20 selected areas.

Cottage Industries Under the First Plan

In the First Plan, programme was drawn up for ten industries, viz; village oil industry, soap making with neem oil; paddy husking, palm gur industry, gur and khandsari industry, leather industry, woollen blanket making, high grade hand made paper; bee keeping and cottage match industry.

In the First Five-Year Plan at the centre, the total allotment originally made was about Rs. 7.5 crores. In addition about Rs. 20 crores become available from the proceeds of a cess levied on the textile industry for the development of khadi and handloom industry. In the States, the provision made was about Rs. 12 crores. Against these provisions the expenditure incurred is estimated to be about Rs. 43.7 crores, of which Rs. 33.6 crores were incurred by the Central Government, and agencies responsible to it and Rs. 10.1 crores in the States. At the Centre, out of Rs. 33.6 crores, handloom accounted for Rs. 12.2 crores, Khadi for Rs. 12.3 crores, Small Scale Industry for Rs. 4.4 crores, village industries for Rs. Rs. 2.9 crores, handicrafts for Rs. 82 lakhs, sericulture for Rs. 65 lakhs and coir for Rs. 30 lakhs. In the community project areas also there was an outlay on the development of rural crafts and industries of Rs. 1.8 crores.

Almost every state expanded its programme for establishing training institutes, demonstration centres, training-cum-production centres tuitional classed and peri patetic schools.

Useful work was done at a number of institutions, such as, the cottage industries, experimental workshop and the village industries research laboratory at Poona, the cottage industries research centre in Mysore, the sericulture centre in Assam and the research centre for Salt in Rajasthan. Several States have set up emporia and sales depots. In 1955-56 emporia were established in Pepsu, Rajasthan, U.P., Punjab, and Jammu and Kashmir and sales depots for silk were set up in W. Bengal, and Mysore and for handloom in Bombay and the Punjab.

The progress of Central Expenditure on village and small industries during the First Five-Year Plan is shown in the following statement:

Progress of Development Expenditure. (Rs. Lakhs)

Industry	1951-52	1952-53	1953-54	1954-55	1955-56 (Revised)	1951-56 (Total)
1	2	3	4	5	6	7
Handloom	0.14	5.33	293.52	353.25	569.97	1223.21
Khadi	1.68	19.00	181.43	332.70	703.00	1237.81
Village Industries	0.59	0.73	15.91	67.61	205.00	289.84
Small Scale Industries	5.61	3.99	31.68	147.44	252.00	440.72
Handicrafts	4.50	2.60	14.00	16.00	45.00	82.10
Sericulture	1.42	2.70	3.88	7.91	50.00	65.91
Coir	—	2.18	1.56	5.00	21.00	29.74
Total	13.94	37.53	541. 98	929.91	1845.97	3369.33

Efforts for promoting small scale industries were intensified from 1954 onwards along lines recommended by an international team which was sponsored by the Ford Foundation. Broadly the aim of the programme was to provide financial and technical assistance to the existing small scale industries and to encourage the estalishment of new ones.

For carrying out the programme the Central Government set up a Small Scale Industries Board (which included representative from the State) appointed a Development Commissioner for small scale industries and established regional Small Industries Service Institutes and a National Small Industries Corporation. At the same time, the State Governments were assisted in strengthening the staff of Industries Departments.

Four regional small Industries Service Institutes which were established at Delhi, Bombay, Calcutta and Madras were intended to serve as the main centre for an industries extension service which could provide technical assistance and guidance to small enterprenuers in urban and rural areas. Branch institutes were set up at Trivandrum. Hyderabad, Patna, Ludhiana, Rajkot and Agra. It was also declared to set up such branch institutes at Allahabad, Cuttack, Shillong, Indore, Hubli and Bangalore.

The services of foreign experts for a number of particular small scale industries such as foundry, hand tools, surgical instruments and others were also secured.

The National Small Industries Corporation set up in February 1955, with an authorised capital of Rs. 10 lakhs, was entrusted with many of the commercial and marketing aspects of the development of small scale industries.

At the end of the First Plan, it has supplied machines worth Rs. 8 lakhs on hire purchase terms. A few wholesale depots were opened in principal producing centres, as for instance, for foot-wear at Agra, for locks at Aligarh, for hosiery at Calcutta and for pottery at Khurja.

In 1955-56 the Central Government accepted in principal the Stores Purchase Committee's recommendations that certain classes of stores should be reserved exclusively for purchase from cottage and small scale industries, that price differential be allowed to them in relation to the products of large scale industries, that certain relaxations in standard should be permitted for hand made products and that facilities for the registration of cottage and small scale industries should be improved. The value of purchase made from cottage and small scale industries by supply organisation of the Central Government increased from about Rs. 75 lakhs in 1955-54 and Rs. 105 lakhs in 1954-55 to Rs. 341 lakhs in 1955-56. The items purchased by the Government included handloom cloth, khadi, hosiery, leather goods, coir product, locks, tentage etc.

Grant of Loans

It was decided to liberalise terms and conditions for the grant of loans to cottage and small industries from State Governments, from co-operative banks, and from other agencies. A scheme of liberalised terms and conditions was introduced in June 1955, under this scheme the Central Government agreed to contribute in the ratio of 2 : 1 to the provision made by States from their resources, and to bear losses in this proportion in the case of loans to private parties and in the proportion of 3 : 1 in the case of industrial co-operatives. Loans were to be allowed to small entrepreneurs upto 75 per cent of the value of security offered.

During 1955-56 State Financial Corporations were established in Madhya Bharat, Andhra and Orissa, thus bringing the total number of such corporations so far

established to thirteen. In 1955-56 State Financial Corporations approved loans amounting to over Rs. 3 crores.

Development schemes for individual handicrafts were implemented by State Governments, but a few schemes were taken up directly by the Board. These concerned the training of artisans, setting up of pilot projects for selected handicrafts, establishment of design centres, participation in exhibition, publicity, marketing and research. The Board set up several production and training centres, as for instance, for weaving at Kanjeevaram, for dolls at Bombay, for brocades at Surat, for toy making at Kondapally, for the pottery at Delhi, etc. Besides the Board also initiated a comprehensive marketing survey of handicrafts which was completed before the end of the plan period. It established four regional design Centres at Bombay, Calcutta, Bangalore and New Delhi. The Board participated in and also arranged a number of exhibitions within India and also in foreign countries.

Financial assistance on an increasing scale was given to the State Governments for the development of local traditional handicrafts, such as, fine mat-weaving, brass-ware and bamboo products in Madras, ivory, chikan and carpets and druggets in U.P., brass and bell metal horn, mat and couch shells in West Bengal, carpets and druggets in Jammu and Kashmir; Calico Printing in Pepsu and Madhya Pradesh, himroo, paithan, bidri and Nirmal works in Hyderabad; Sann hemp products and glass toys in Bombay; brass-ware in Mysore; artistic ivory-ware and carpets and druggets in Rajasthan; and stone carving and silver filigree work in Orissa. Assistance was approved for setting up emporia in Andhra, Assam, Madras, Jammu and Kashmir, Madhya Bharat and Orissa. Institutions like the Vishwabharati in W. Bengal, the Indian Co-operative Union at New Delhi and the Kalakeshtra Research Centre and the Mangalore Women's Co-operative Society in Madras were also assisted.

Under the Second Plan

Says the Second Plan "Village and small industries in their different aspects are an integral and continuing elements both in the economic structure and in the scheme of national planning. In view of their importance the sector of village and small scale industries is not to be viewed as a static part of the economy, but rather as a progressive and efficient decentralised sector which is closely integrated on the one hand with agriculture, and on the other hand with large scale industry." The programmes for the development of such industries to be carried out during the Second Plan period is considerably larger than the first Plan. These programmes were reviewed by a committee, the Village and Small Scale Industries Committee—better kown as the Karve Committee, which was appointed by the Planning Commission in June 1955. In making its proposals, the committee kept the following three principal aims in view:—

(1) To avoid, as far as possible, further technological unemployment.

(2) To provide, for as large a measure of increased employment as possible, and

(3) To provide the basis for the structure of an essentially decentralised society, and also for progressive economic development at a fairly rapid rate.

The Committee was of the opinion that even in traditional village industries technical improvements should be adopted and there should be a regular programme of gradual transaction to better technique It wanted a pattern of industrial activity in which a group of villages converging on their natural, industrial and urban centres form a unit.

It recommended the development of small and cottage industries, producing items of common consumption such as cotton cloth, woollen goods, hand pounded rice, vegetable oils, gur and khandeshri, leather footwear and matches; sericulture, silk weaving, handicrafts, coir spinning and weaving also received its attention. It recommended for a total outlay of Rs. 260 crores, so that it could provide whole time, part time or seasonal employment to nearly 5 million people. It also recommended that in order to encourage such industries further, a ceiling should be fixed on the output of factory industry and any increased demand should be met exclusively or partially by these industries.

The Industrial Policy Resolution of 1956 makes reference to the policy of supporting cottage and Small Scale industries. Accordingly the aim of the State policy will be to ensure that the decentralised sector acquires sufficient vitality to be self-supporting and its develpment is integrated with that of the large scale industry. The resolution further mentions the establishment of industrial estates, so that the handicaps arising from lack of technical and financial assistance to suitable working accommodation and of inadequacy of facilities for repairs and maintenance are removed.

The Second Five Year Plan provides for an outlay of Rs. 200 crores, in addition to working capital requirements. Of this, Rs. 59.5 crores are for handloom industry; Rs. 16.7 crores for Khadi; Rs. 38.8 crores for village industries; Rs. 9 crores for handicrafts and Rs. 55 crores for small scale industries. Besides this amount Rs. 11 crores has been provided for cottage and medium industries and industrial loans and Rs. 7 crores for vocational and technical training for the rehabilitation of displaced persons.

The programme of the development for some of the industries has been drawn up as follows :—

(1) To increase the production of cotton goods, the Khadi production will rise from 34 million yards; to 60 million yards at a total expenditure of Rs. 21 crores.

(2) The production of woollen blanketing cloth will increase from 2,50,000 yards to 1 million yards; Substandard cloth from 500,000 yards to 1 million yards; and of other varieties of cloth from 1,25,000 yards to 1.5 million yards.

(3) Under the Khadi Board programme, 50,000 existing ghanis will be replaced by improved or Wardha **Ghanis.**

(4) The production of hand made paper is proposed to be raised to 4,400 tons, by setting up 80 factory units, 400 cottage units and 400 school units.

A special programme has been chalked out for developing small scale industries. The common features of these industries are their urban and semi-urban location, use of machines, power and modern techniques. Their principal needs are the imparting of training and technical advice regarding the adoption of improved tools, machines and new techniques, supply of adequate finance on fair terms, facilities for importing or purchasing machines and assistance in the marketing of products.

The Central Government programme to help such industries involving an expenditure of Rs. 10 crores includes further extension service, a scheme for the purchase of machinery, and establishment of a marketing service and the undertaking of pilot projects in selected centres and industries. The number of Small Indus-

tries Service Institutes will increase from 4 to 20. These institutes will provide technical advice regarding improved type of machines, equipment and processes, use of raw materials and method of reducing cost. They will also arrange for demonstrations in use of these devices through model workshops set up in centres outside the institutes and through mobile workshop mounted on trucks. Marketing services will also be supplied by these institutions on three lines. (1) Wholesale depots will be opened for certain articles in certain areas; and mobile vans service will be operated to sell these goods in distant places. (2) The National Small Industries Corporation will negotiate with the Director General of Supplies and Disposal for placing stores purchase order with small industries; and (3) The Small Industries Service Institutes will explore the scope for obtaining orders from large industries for various components and parts which small units can manufacture.

A provision of Rs. 10 crores has been made for setting up industrial estates with a view to provide conditions favourable to working efficiency, maintenance of uniform standards in production and economic utilisation of materials and equipment.

Harnessing Of Water Resources In Saurashtra

By : P. D. Budhbhatti

General Features:

The topography of Saurashtra is outstandingly of different distinct features. It is geologically a self drained region, in fact the rivers and brooks of this region are fed by the Rains over its own region only. Therefore, it would be visualized that the resources of the water supply in this region with regard to :—

(1) Sub-soil water;

(2) Storage by means of reservoirs;

(3) Replenishment of wells;

have entirely to depend upon the annual rainfall.

Outstanding Features:

Over and above this, other outstanding features of the general lithosphere of this region are :—

(1) The general declivity of the lie of land being very steep;

(2) Rivers have also heavy gradiant.

This nature of the topography has resulted into :—

(a) Rivers and brooks to be in floods during the short period of the monsoon season;

(b) The velocity of the floods in rivers and brooks being very great; these have created a situation of :—

(1) The general sterility of the soil due to the heavy flood scour of the upper crust of the land which is augmented by the erraticity of the rains, hence our lands suffer from the Evil of the Soil Erosion.

(2) Lessening of the rate of the subsoil percolation. Sub-soil water percolation is the only factor that plays part in the replenishment and recouperation of the wells.

Due to decrease in its rate by the erracity of the rains it has resulted into the general lowering of the sub-soil water level.

Under the circumstances ours should be endeavours to conserve the supply of the water from the rainfall to the maximum economical utilization, and efforts be directed for implementing :—

(1) to increase the sub-soil percolation;

(2) to decrease the effects of the Evil of the Soil Erosion.

Therefore, as a stepping stone the supply of water that could be available from the rains be examined, and in that case :—

(1) Considering the average normal rainfall to be of 24";

(2) The quantity available from the rainfall per sq. mile be 56 million cubic feet.

Therefore the total quantity of water that is received on 22,000 sq. miles would be 12,32,000 million cubic feet. The quantity of 12,32,000 m.c. ft. of water would only be available from the rains if the rainfall annually is normal, seasonal, and periodically recurrent; but such not being the case, the average quantity is rather a reduced one with the occasional greater freshets.

This available supply of water from the rainfall is flickered away generally in the following ways :—

(1) Absorption by the land;

(2) Evaporation;

(3) River floods going to the sea.

On assuming the following reasonable ratios in each case :—

50 per cent to be retained by the earth crush of arable retentive lands;

25 to 30 per cent lost by evaporation and;

25 to 20" being lost by evaporation and in rivers and brooks, the quantity lost by way of floods comes to 2,50,000 to 2,00,000 m.c. ft.

The region of Saurashtra has an area of 22,000 sq. miles. Out of this, half of it may be kept out of consideration forming mountains, villages, drainages, and forests.

Half of the area could be available for the cultivation purposes. This area comes to about 7 million acres. This entire area contains both the cultivable and the cultivated areas, that could be cultivated by the monsoon rains, but the area that is at present cultivated is much less.

Harnessing of Rivers:

Hence under the prevailing circumstances it is imperative to harness the rivers and brooks for the utilisation of the stored water for irrigation purposes. In that connection, the suitable demands that "The region should be hydrographically and hydrologically be made rich", and that could be attained by means of :— **"The Chains of the Small Reservoirs, Spread throughout the region, rather than few concentrated scattered irrigation.**

This system of the Chains of the small reservoirs spread throughout the region would make :—

(a) More area of the land available for the retention and absorption of water;

(b) Increase in the wetted area resulting into the cattle fodder enhancement;

(c) Range and rate of percolation increase;

(d) Possible irrigating of small patches of land, say 500 to 2,000 acres;

(e) Construction of such small irrigation tanks possible by (1) utilisation of :— the local labour, thus preventing the local unskilled labour to remain idle; (2) minimizing the need of highly skilled labour; (3) using local materials, thus avoiding the transport bottlenecks and (4) that such projects be made immediate functioning (i.e. contemplation, execution, and working of the project be made within one season).

The regional orientation on the basis of the Chains of the reservoirs spread throughout the united State of Saurashtra, a criterion of judicious harnessing of the water resources, be guided on the economical storing construction.

As stated above, out of the 12,32,000 m.c. ft. of water available from the normal rains, the quantity of water that is lost by way of floods could be about 2,50,000 m.c. ft.

Adjusting our endeavours for utilizing one third of the quantity, say 80,000 m.c. ft., the chains of the small reservoirs be so arranged as to have storages bunding the water from 5 to 10 sq. miles of the catchment area and thus one-third quantity of water that runs away by way of floods be harnessed which would enhance the irrigation for the production of the food to a greater extent.

At least two millions of acres of land spread over the region could be made to come under the plough for the Rabi crop—the 2nd crop—increasing the food-grains by 60,000 tons.

Simultaneously with the construction of the system of the chains of reservoirs, the judicious arrangement of contour bunds should be contemplated. This system of contour irrigation and contour bunds would;

(a) Efface gradually the Evil of the Soil Erosion and thereby enhancing the soil productivity;

(b) There would be possibility of bringing the land that lies idle under the plough;

(c) The absorption of water in the land would be increased;

(d) The replenishment and the recouperation in the nearby wells be enhanced.

These are the salient features depicting the broad outlines of the general possibilities and it is suffice to say that there could be enough water available from the existing conditions to make the land yield increased production — to make the land self-sufficient in food.

Rejuvenating Agriculture

BY: DR. P. C. BANSIL

Depressed Agricultural Production

For one reason or another, agricultural productivity of our country has lacked the necessary incentive and remained depressed.

Constant croppings have reduced the fertility of land and no steps were taken to replenish it. An idea of the grave injury done could be had from a comparison made between the present yields now

and those of a few centuries back. Dr. V. G. Panse, while reading a paper before the Meeting of the Crops and Soils Wing of the Indian Council of Agricultural Research, March 1950, stated that "the average yield on medium type of 'poolej' (annually cultivated) land during the reign of Akbar, was 2,240 lbs., an acre of wheat land (equal to the present average yield in Western Eurpe), 2,333 lbs. on rice land (equal to that in China) and 1,940 lbs. on jowar lands." The standard yields of wheat, rice, and jowar are at present only 828, 902 and 590 lbs. per acre respectively.

Yields Decline

Even if we study the average Indian yields of rice for the last 60 years, we will find they have been declining as explained in Table I.

TABLE I

Average All-India Yields of Milled Rice Per Acre in Lbs.

Year	Yield	Difference	Percentage Decline
1895-96 to 1899-100	942	—	—
1900-01 to 1909- 10	920	22	2.3
1910-11 to 1919- 20	900	42	4.5
1929-30 to 1939- 40	818	124	13.5
1940-41 to 1949- 50	745	197	20.3
1950-51 to 1952- 53	643	299	32.0

This decline in productivity continued even after the Grow More Food Campaign was launched in 1943 and the per acre yields came down by 32 per cent. The position in the case of other food grains was practically the same. (On the other hand, during the same period, Japan succeeded in raising her rice yields from 1,729 lbs. per acre to 2,694 lbs, or by 55.8 per cent.)

Bogey Of Soil Exhaustion

From all this, we must not conclude that our soils have either been exhausted or permanently harmed. The bogey of soil exhaustion, in the past had only helped in reaching wrong conclusions.

The question of soil exhaustion was raised as far back as 1893 by Mr. Voelcker, but he had failed to put forth any positive evidence in support of his contention. Thirty-five years later, the Royal Commission on Agriculture (when faced with the same problem), attributed some loss due to lack of manure, but fully conceded that a "balance has been established and no further deterioration is likely to take place under existing conditions of cultivation." "Later, the Bengal Provincial Enquiry Committee (1930) and Dr. Radhakamal Mukherjee reiterated the same view. The notion that there was soil exhaustion was based on the available data regarding the yield per acre of various crops.

Dr. Radhakamal Mukherjee and Rao Bahadur Bal, the then Agricultural Chemist to the Government of C.P. and Berar, proved that India's soil was not in any way inferior to that of other countries. In the case of Indian soil only the humus, called the 'Reserve Bank of the Soil' was being depleted and called for immediate attention. Otherwise, the 17th Indian Science Conference, concluded that the soil was responsive to improved methods and proper manuring.

Our cultivatior also, though primitive in his methods and orthodox in his views,

is as efficient as his fellow cultivator in the advanced countries. Farmer conservatism and fatalism are more or less the same all over the world. The Report of the American Businessmen's Commission on Agriculture was quite vocal when it pointed out that "the farmer is ordinarily a prudent and conservative man but as his prosperity depends more and more on forces outside his control, this prudence and conservatism are affected with a touch of fatalism and in some cases, recklessness". Even so, as Dr. Voelcker observes, the Indian peasant is not to be viewed as "a living emblem of inertia. In reality he is not so very conservative as he is supposed to be."

Possible Explanation

Despite a long tradition of sound agricultural practices, in India the gradual deterioration in methods resulted from lack of encouragement and proper technical help. Other factors contributing towards such deterioration, were the migration of more efficient agricultural labour to the industrial areas, lack of equipment and finance, inability of the administration to mobilize the resources of the cultivator and the then existing land system under which the cultivator had no locus standii on the land.

Statistics in Indian agriculture had until very recently hardly any importance. The collection of such data was merely treated as an appendix of the administrative routine and incidental to the collection of land revenue. It was more or less a by-product of official activity. As a result many times the average yield per acre, as indicated by the available statistics, was untrue or even imaginary.

Future Outlook

This discussion should not, however, give us the impression that our yields are much higher as compared to those of other countries or that they have not declined over a period. It only proves that not much reliance can be placed on the existing data. But, also there can be no two opinions about the fact that the existing yields are very low.

Future Policy

Though land reforms have so far been directed towards eliminating intermediaries, the ultimate aim is "to work out a co-operative system of land management in which the entire land and other resources of the village will be so managed and developed as to increase and diversify production and provide fuller employment to all the people working on the land." If in the second phase, steps could be taken to bring about a change in the management so that transactions in land become easy and it begins to change hands like any other commodity, most of our land problems would be automatically solved.

As 'land gifts' under the Bhoodan movement increase in a particular area, there follows a drop in land markets and their prices. Other social movements like the Hindu Code Bill may also help towards greater flexibility in landed property and bring about a fall in its values. The combined effect of these factors may result in a psychological change in our ideas towards landed property.

Communications And Agricultural Production

Good roads help the cultivator to market his produce profitably. They also "promote the free exchange of ideas no less than that of merchandise" opined the Royal Commission. They help in reducing illiteracy, the **summum bonum** of all the rural ills, as closer contact is established between the rural and urban areas.

Cheap transport helps the cultivator in reducing his cost of production. He is thus able to supply his goods in the mar-

ket at cheaper rates. Invariably, transport constitutes a major percentage of the cost even when the wholesale dealer is quite near the village. Such costs have been estimated in India by the marketing survey as between 7 to 27 per cent of the consumer's price. In U.S.A. transportation does not account for more than 23 per cent of the total marketing costs.

No road development programme can be of any real meaning unless the 5 lakhs and odd Indian villages are connected with the marketing centres and other State roads or national highways. The Central Roads Organisation has formulated a 'model scheme' for the development of village roads on a co-operative basis and has made an initial offer of a grant of Rs. 15 lakhs from the Central Road Research fund as a contribution towards specific projects.

The transport system of the country in the past had been built up to serve strategic rather than economic ends. The railway and road system were regarded as the most powerful instruments of administrative co-ordination. Instead of helping the home economy, the system deepened the economic distress in the rural zones: 'firstly, by precipitating "uneconomic localisation" of industrial units in the new urban areas. The position has now completely changed. The new transport system evolved under our planned economy has a definite role to play in the economic development of the country and is thus sure to help increase production.

Marketing

With the break up of the old system of predominantly self-sufficient village economies and the setting up of industries depending on agricultural raw materials like cotton and oilseeds, commercialisation of agriculture started. The peasant began to produce for the market and agricultural commodities began to move from the surplus to the deficit areas. Thus the need of an agency for marketing was felt. This is especially so in regard to agricultural produce which is produced seasonally, but is consumed throughout the year. The importance of an efficient marketing system as a fillip to agricultural production can, therefore, hardly be minimised. Notwithstanding all this, before the first world war, hardly any country, with the exception of the United States, appreciated the need for the efficient marketing of agricultural produce.

The Royal Commission on Agriculture recommended, for the first time in 1928, a proper study on marketing. The point was further emphasised by the Central Banking Enquiry Committee and the Provincial Economic Conference held in 1934. The Government of India in January, 1935 announced a scheme for the study of marketing and appointed a central marketing staff attached to the then Imperial Council of Agricultural Research. The provincial governments were also asked to appoint their own marketing staff and the Government of India undertook to meet the initial cost from Central Funds. Although many valuable reports have since been published, not much has yet been achieved by way of producing an efficient marketing organisation for the cultivator.

When the First Five-Year Plan was launched in 1951, some work had already been done in this field. Regulated markets had been established in some of the States to remove the disabilities of the farmers in Mandies. Co-operative marketing had made some headway particularly in selling sugarcane and cotton.

When all the villages in the country are covered by Panchayats in the next few years and marketing facilities are developed, rural development will get further stimulus. The Second Five-Year Plan has

provided a sum of Rs. 2.07 crores for agricurtural marketing.

A Marketing News Service Scheme is proposed to be introduced in the next Five-Year Plan. This will considerably help the cultivator, who may develop a consciousness to produce for the markets and increase production.

CONCLUSION

All this discussion will lead us to the conclusion that if agriculture is to play its vital role in the economic development of the country, the importance of these exogenous factors cannot be under-rated. Technological improvements alone will not solve the problem.

HOW BEST TO RAISE THE CASHEW?

By: S.D.S. Albuquerque, M. Vazir Hassan and K. Raghu Shetty

In the next few years, thousands of acres in many States of the Indian Union will come under a crop that has been sorely neglected so far. It is the cashew-nut, one of our major dollar-earning crops. At present, it earns for our country 19 million dollars (12 crores of Rupees) by the export of cashew kernels, and another 60 lakhs of Rupees by way of cashew shell oil.

This extension of the crop has been necessitated because we produce 60,000 tons of raw cashewnuts a year as against our requirements of 1,45,000 tons. The difference we meet by importing raw cashewnuts from East Africa at a cost of 4½ crores of rupees a year.

To make up the deficit, an additional area of six lakhs of acres needs to be put under the cashew, which the country is planning to accomplish in the Second Five-Year Plan.

As farmers lack precise information on the correct method of raising the crop, they will find the hints given below useful in starting new cashew plantations. In this article, some hints on the preparation of land, selection of seed and planting are given.

A Hardy Plant

Cashew is one of the hardiest of drought-resistant plants, thriving under a variety of soil and climatic conditions from sea level to an elevation of 2,000 feet. It comes up exceedingly well in the sandy soils and lateritic hill slopes of the West Coast receiving an annual rainfall of 120 to 150 inches. The crop performs equally well on the sandy soils of the East Coast with only 35 inches of rainfall. Barring the coastal belts, it has been successfully grown a 100 miles away from the coast in the hinterlands also. But the plant is very sensitive to frost and does not grow well on shales and heavier soils. It does not also tolerate water-logged conditions.

Extensive stretches of Government waste lands available in South Kanara (Mysore State), new areas along the coastal belts of the States of Madras, Andhra Pradesh, Bombay, Orissa and West Bengal, and the lower hill slopes of Assam can profitably be brought under the cashew.

Cosmopolitan Nature

As the cashew is cosmopolitan in its habit and adapts itself to a wide range of soil climatic conditions, any land is suit-

able for its cultivation. Cashew comes up in waste lands that are unsuitable for the cultivation of any other crop. Vast stretches of Government waste lands lying between the Ghats and the cultivated plains are available in South Kanara. These are eminently suited for growing the cashew.

On hill slopes covered with other vegetation, there is no need to clear the scrub growth for planting the cashew. It is sufficient if the land is cleared around the pit to a radius of two to three feet. The uncleared vegetation on the hill slopes will help in preventing soil-wash and in conserving moisture. But if there are any big trees, they should be cleared before planting the cashew, as otherwise, the roots of these trees will have a bad effect on the cashew plants. As the plants grow up, further clearing of the land can be done.

In Low-lying Lands

In low-lying level lands where the cashew is intended to be cultivated, the site may be cleared of all vegetation and weeds, so that intercrops like sweet potato, tapioca, chillies, ragi and even dry paddy may be raised in the early years of the plantation.

After the site has been selected and cleared, it has to be fenced for preventing cattle and human trespass. In the initial stages, the cashew plants require some attention and in the absence of a strong fence, the young plants may be trampled over by cattle and other animals. So either a mud wall or a live-hedge with suitable thorny plants or a fence with bamboo thorns may be raised along the boundry of the site selected for planting.

In South Kanara, enclosing the garden by mud walls is a common feature. These walls are five feet high, about 2 to 2½ feet broad at the base, and tapering to about nine inches at the top. It costs about Rs. 50 to enclose an acre with mud walls. The cost will be proportionately less for a larger area of continuous blocks.

The cashew is universally raised by seed. The transplantation of cashew seedlings is not generally very successful, as many of them die in the process. Also, the extra labour and cost considered worth the trouble without any particular advantages being derived by the method. The sowing of seeds at site is, therefore, preferred.

Preparation of Land

Preparation of the land to give a good start to the plant is as important as the selection of good seed. Pits 1½ feet X 1½ feet X 1½ feet and spaced 20 to 30 feet apart, depending on the fertility of the soil, should be dug well in advance of the sowing season and allowed to weather for at least a month. The digging of pits on the West Coast where the planting season commences with the early rains of the south-west monsoon may be done during April, and the pits allowed to weather till the end of May.

On the East Coast and in places where the planting season is during the north-east monsoon, the pits may be dug in September and allowed to weather till the end of October.

Just before the break of the monsoon, the pits may be refilled, adding, if possible, a little well rotted cattle manure and ash. This practice of sowing seeds in well-prepared and spared pits is practically unknown at present, except in some places in Malabar and in Kerala. If this is done, your plantation will have regularly spaced trees and the plants will also get a good start.

Selection of Seed

As the cashew is a perennial tree living up to 30 to 40 years, any mistake made

in the early stages will have to continue as long as the plantation lasts. As in other tree crops, one of the important points for consideration in raising a good plantation is to select seeds from regular cropping, high-yielding, healthy trees, bearing medium sized nuts. The selection of the best tree should be the guiding principle and not the outward appearance of the seed.

Individual nuts picked out from a bazaar heap though of good quality and of good good outward appearance, should not be used as seed, because of their unknown parentage which may lead to uncertain behaviour of the progeny resulting in indifferent and often uneconomic plantations. Seeds from the current season's crop collected between March and May should be preferred for sowing, as seeds from the past season do not give satisfactory germination unless packed in air-tight containers.

Sowing the Seed

The seeds should be sown with the onset of the monsoon in prepared pits; two seeds per pit. The best position in which the seed is to be sown is with the stalk end and the suture slightly inclined and placed at a depth of three inches. If the seed is planted in this position, the flashy cotyledons do not come out of the soil surface. Even though the maximum germination is obtained by sowing the seeds at a depth of one inch this has to be avoided as in this case the cotyledons come out of the soil surface, attracting crows, jackals, rodents and monkeys which damage or destroy the young seedlings.

Germination takes place in about 15 days, and is complete in about a month. At the end of 45 days, the surplus seedling in each pit has to be removed, leaving only one vigorous, healthy seedling. A thorny enclosure may also be given to protect the germinated seedlings.

In jungle areas and hilly tracts, where depredations by rodents, jackals, etc., are severe, the seedlings may preferably be raised in small coffee baskets a month or two before the planting season, and the seedlings with the baskets intact planted in the prepared pits with the onset of rains. The containers can be made of hill grass which is very cheap and available in large quantities in South Kanara, or with coir fibre or stout bamboos. The containers may be six to nine inches long and four inches in diameter. These will have to be filled with made-up soil consisting of two parts of red earth, one part of cattle manure and one part of ash. The seeds may be sown in these containers in April, so that two-month old seedlings will be available for planting in June. They have to be nursed and watered till they are planted.

Cost of Raising a New Plantation

The cost of planting one acre of cashews at 20—foot spacing is given below:—

	Rs.	nP.
Clearing site, lay-out, etc. (if necessary)	10	00
Digging 108 pits (1½ feet X 1½ feet X 1½ feet)	5	50
Cost of closing the pits	2	25
Cost of 36 baskets of well-rotted cattle manure	9	00
Cost of three pounds of seed at Re. 0.50 per pound	1	50
Cost of sowing	1	25
Cost of thinning	0	50
Cost of enclosing one acre with mud wall	50	00
Total: ...	80	00

Given above are some of the hints which when followed will enable the grower to raise a cashew plantation on systematic lines.

—"Indian Farming"

SMALL SCALE INDUSTRIES

By: A. S. E. IYER

The National Small Industries Corporation was set up in February, 1955 as a Private Limited Company primarily for rendering marketing assistance to small industrial units. This followed the acceptance by the Government of the recommendations made by an international team of experts which toured this country at the invitation of the Ministry of Commerce and Industry to study the problems of small scale industries for the purpose of recommending a programme of development. Among other things, the Ford Foundation Team recommended assistance to small scale industries in the form of (a) providing technical know-how, (b) credit facilities and (c) marketing assistance. The corporation was set up for implementing the last recommendation, viz., providing marketing assistance to the small industrial units in the country.

During the last three years of its existence Government of India entrusted to the Corporation additional functions like the supply of machinery to small scale units under a hire purchase scheme, construction and management of two industrial estates, one of which is expected to be the biggest in Asia and the setting up of two Proto type Production-cum-Training Centres, one at Rajkot and the other at Okhla adjoining the Okhla Industrial Estate. Though the Corporation started with an authorised capital of Rs. 10 lakhs, it has now been increased to Rs. 50 lakhs, 40 lakhs of which have been subscribed. The entire capital is being held by the Central Government. With a view to widening and de-centralising its activities, four subsidiary corporations, one each in the Eastern, Western, Northern, and Southern Regions were set up on April 1, 1957.

SPECIAL ASSISTANCE

In an endeavour to assist small industries to participate in Central Government indents on a scale larger than hithertofore, various organisational and procedural difficulties had to be sorted out, some of which were so complicated that the Central Government decided to utilise the services of an American expert in the line. Following the recommendations of the expert, the Central Government announced a policy decision in November, 1956, for assisting the small scale units to gradually increase their participation in the Central Government's Stores Purchse Programme. The new procedure indicated in the policy decision envisaged categorisation of the stores normally purchased by the various departments of the Central Government through D.G.S. & D. into four groups. The first two groups are to include items which are beyond the scope of the units in the small scale sector. The third group would contain all items which can be manufactured both in large scale as well as in the small scale sector. For items in this group a price preference upto 15 per cent over the acceptable quotations received from large scale units would be admissible to the units in the small scale sector depending on the merit of each case. The fourth group is to include certain selected stores which would have normally gone to third group but kept reserved entirely for purchase from the units in the small scale sector.

[To be continued in July issue].